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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
MARCANTONI, PAUL D	
ART UNIT	**PAPER NUMBER**
1755	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/759,678	REDDY ET AL.	
	Examiner	Art Unit	
	Paul Marcantoni	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *8/17/06 RCE filing*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-39* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-39* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/28/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

The applicants' 8/17/06 RCE filing and response is acknowledged and has been considered but is not convincing.

Obviousness-Type Double Patenting:

Claims 1-39 remain rejected under the judicially created doctrine of obviousness type double patenting as being unpatentable over claims 1-13 of US Patent No. 6,796,378 B2 (Reddy et al.) alone or in view of Yamashita et al. '418.

Reddy et al. teach applying his cement composition comprising cationic polymer (cationic derivatized starch), calcium aluminate, water, and retarder (col.2, line 46) for a well cement. Water can be considered an activator because it activates the hydraulic activity of hydraulic cement to allow it to react and eventually set into a hardened mass. Reddy do not teach explicitly the presence of an accelerator (or activator). However, Yamashita et al. teach conventional additives may be added to cement compositions which include high early strength agents/promoters (which accelerators are). Yamashita et al. teach that KOH, NaOH, and alkanolamines are conventional high early strength additives to cement compositions and its addition to Reddy et al.'s cement composition would have been an obvious design choice for one of ordinary skill in the art. Note that on page 10 [0033] of applicants' specification they teach sodium hydroxide or postassium hydroxide and alkanolamines. Further, applicants' specification teaches high strength at a faster rate by adding these activators. That is the same as a high early strength agent.

The applicants have petitioned to withdraw the previously filed and approved Terminal Disclaimer. The applicants will soon be receiving the decision of the petition in an official communication indicating that the petition is approved and Terminal disclaimer thus withdrawn. Nevertheless, this ODP rejection remains as stated above.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Objection to the Specification:

The applicants' specification is objected to under the first paragraph of 35 USC 112 as the applicants do not define what they mean by the term "activate" (ie the cement composition) or an "activator". Does applicants' activator mean the same as an accelerator? NaOH, KOH, and alkanolamines are known and conventional in the art as accelerators. Please state if the applicants' activator is synonymous with an accelerator.

Accelerators are noticeably missing from the list of other conventional additives such as retarders so it appears that applicants' activator is an accelerator.

35 USC 112 Second Paragraph:

Claims 1-39 are rejected under the first and second paragraphs of 35 USC 112 for failing to particularly point out and distinctly claim applicants' invention.

The term *activating* in claim 1 and its dependent claims are indefinite. It is not clear what applicants mean by activating or use of an activator? Hydraulic cement is activated and setting into a hardened mass initiated by adding water. Applicants do not define what they mean by activating in their specification and claims and claim 1 defines no specific activator. It is improper for applicants to read other potential activators from dependent claims or the specification into claim 1. Further, do applicants mean an "accelerator" by the use of the term "activator". Please indicate in the next response if these two terms have the same meaning. If applicants hold that they are the same, then this rejection will be withdrawn. Otherwise, applicants may consider defining the specific activators (accelerators?) in claim 1.

The applicants newly added term "chosen" (which replaces the term desired) is indefinite and is synonymous with predetermined, an indefinite term. It can be found in at least two claims such as claims 14 and 25. Applicants may consider simply deleting the terms "in a chosen thickening time" in claim 14 and "for a chosen period of time" to resolve this issue. The scope of the claim will be unchanged by this deletion.

The term "high density particles" have been shown by applicants to be definite. Applicants define this term on page 20 of their specification. High density particles

means particles that are heavier than the settable fluid to which the particles are to be added.

New Matter:

Claims 1-39 are rejected under the first paragraph of 35 USC 112 and 35 USC 132 as the specification as originally filed does not provide support for the invention as is now claimed.

The terms "from which hydrocarbons are removed" are new matter. It would appear that the subterranean formation or wellbore which hydrocarbon is removed is inclusive of hydrocarbons such as petroleum (oil), natural gas, methane, oil shale, etc. However, applicants do not appear to have literal support for "from which hydrocarbons are removed". They do have support for a specific hydrocarbon (petroleum) on the second to last line of page 1 of paragraph [0003] of applicants' specification but they do not have support for all hydrocarbons.

35 USC 102:

Claims 1-39 are anticipated under 35 USC 102(b) over Yamashita et al. '418.

Yamashita et al. teach a cement composition (which thus is used in a method to cement) comprising acrylic acid copolymers having an amino group in their molecules and their quarternized compounds (col.17, lines 5-7). This quarternized compound is cationic and thus reads upon a cationic polymer. Further, Yamashita et al. '418 teach *conventional* additives to cement compositions include retarders such as phosphonic acids and their derivatives (col.17, line 25), high early strength agents (ie accelerators or as applicants name them activators) such as KOH or NaOH (col.17, lines 35-40) as

well as alkanolamines, surfactants (same as surface active agents-see col.18, line s 35-55), thickeners (same as viscosifiers-see col.19, line 3), silica fume, fly ash, etc. Yamashita et al. further teach these additives may be added in plural (col.19, line 9).

35 USC 102/103:

Claims 1-39 are rejected under 35 USC 102(a) and (b) as anticipated, or in the alternative, under 35 USC 103(a) as obvious over Cowan '711 or '654 or '070, Vijayendran et al. '832 B1, Nadolsky et al. '603, Smith et al. '939, Booth '407, Lu et al. (CN 1385388), JP 2000191350 (Tobori et al.), JP 09020536 (Tamura et al.), Mizunuma et al. (JP 06128001), Koizumi (JP 05053293), Yamaguchi et al. (JP 61256956), or JP 59109663 (Takenaka Komuten Co.) alone or in view of Vijn et al. '488 or Yamashita et al. '418, Laramay et al. '318, Scheetz et al. (abstract), or McCurrich (US Patent No. 4,131,480).

Note: Abelleira et al. has been withdrawn because they do not explicitly teach a cationic polymer. It only teaches cationic air entraining agents (col.4, line 1) but do not teach cationic polymers. Borchardt (DE 3213799 abstract) has been withdrawn because it is the same reference as Smith et al. '939.

All of the remaining primary references above teach adding a cationic polymer to cement. All the primary references explicitly teach the term cationic polymer though Cowan does teach quartenary ammonium chlorides which are inclusive of cationic polymers (col.3, lines 62-63 of '711 for example) The prior art cationic polymer is the same as applicants' cationic polymer and thus would also function as their particle size distribution adjusting agent. The applicants particle size distribution adjusting agent is essentially new words for defining what is already old in the art. Namely, this PSDA

agent is actually a flocculent or flocculating agent which causes particles in suspension to floc together or agglomerate (see page 7, line 8 of applicants' specification). The activator or activating agent reads upon either water (which activates the hydraulic activity of cement) or an accelerator which accelerates and activates the rapid setting of cement. Note that in claim 1 applicants do not specify or define any specific activators and though they may mean accelerator by the use of the term activator, water is the only ingredient which imparts the hydraulic activity to cement and starts the hydraulic reaction for hardening and setting of the cement.

The use of a retarder is *conventional* and well known in cement compositions to retard or delay the setting of cement. Vijn et al. '488 teaches in column 4, lines 24-35 that the addition of a retarder to cements for applications such as well cements is known and conventional in the art. Vijn also teach adding dispersing agents, defoamers, silica flour, formation conditioning additives, expansion aids, set accelerators (activators), weighting agents, lightening agents such as fly ash or fumed silica (see col.4 lines 10-16 and col.5, lines 1-20).

Yamashita et al. '418 teach *conventional* additives to cement compositions include retarders such as phosphonic acids and their derivatives (col.17, line 25), high early strength agents (ie accelerators or as applicants name them activators) such as KOH or NaOH (col.17, lines 35-40) as well as alkanolamines, surfactants (same as surface active agents-see col.18, line s 35-55), thickeners (same as viscosifiers-see col.19, line 3), silica fume, fly ash, etc. Yamashita et al. further teach these additives may be added in plural (col.19, line 9).

Laramay et al. '318 teach adding *conventional* additives to cement compositions such as fluid loss additives, viscosifiers, retarders, accelerators (ie activators), dispersants, weight adjusting agents, fillers, (see col.10, lines 25-30), surfactants (col.11, line 14), fly ash, silica flour etc. (col.11, lines 20-23). It would have been an obvious design choice for one of ordinary skill in the art to add conventional cement additives of Laramay et al. '318, Vijn et la. '488, and Yamashita et al. '418 to cement compositions such as those of the primary references because these are routinely used in the art.

Scheetz and McCurrich '480 et al. teach the addition of sulfonated naphthalene condensate is old in the cement art as an additive because it is a conventionally used superplasticizer (dispersant) for improving the pumpability of the cement slurry (see abstract). The applicants call this component a "yield stress reducing agent" but it is better known in the art as a superplasticizer (or dispersant) which are conventional additives to improve cement pumpability.

Response:

ODP Rejection:

The ODP rejection is maintained and applicants have withdrawn their earlier approved terminal disclaimer. The applicants argue that Reddy does not teach activating his composition. The examiner disagrees and notes that water itself is an activator for cement. Further, Yamashita teaches that applicants' activators or conventional additives (accelerators) added to cement and could have also been applied to the Reddy cement composition.

The examiner is also permitted to give the claims their broadest possible meaning and interpretation and applicants cannot define a term with a term not even commonly accepted in the art (and potentially repugnant) and then use their own definition to argue against what is known in the art. Water activates hydraulic cement and without it it would be not much use to anyone. The applicants cannot argue in claim 1 limitations such as specific activators from dependent claims or their specification into this claim and this term is given its broadest possible meaning which means that water itself can be an activator. Had applicants defined specific activators in claim 1, then the examiner would withdraw from his position. However, it is improper to argue that they mean NaOH or KOH or alkanolamine or accelerator when water itself is an activator of cement to start hydraulic activity and NaOH or KOH or alkanolamine or not actually in claim 1. Further, just what do applicants mean by activate or activator? Do they simply mean the more common term in the art and the common additive to cement known more widely as an accelerator? Applicants are respectfully requested to respond to whether their activator is the same as an accelerator.

The applicants again cannot be their own lexicographer (especially if repugnant to terminology already commonly accepted in the art) if what they really mean by activator is accelerator as they seem to allude to this in the second paragraph on page 7 of their response. They state that water "retards" cement thickening (assume you mean setting time) time. The applicants cannot hold hostage their own definition of activator (or accelerator) because "activator" it is not a commonly accepted term in the art for what they mean for their disclosure (ie accelerator). Had applicants said

accelerator, that would have been understood but they must understand that while KOH or NaOH may activate setting and accelerate it, water itself still activates the hydraulic activity of hydraulic cement and is also an activator. The examiner is not furnishing any evidence because water does activate cement's hydraulic activity. Without water, hydraulic cement dry powder would be useless.

Desired and Chosen:

Both these terms are indefinite as explained above. The examiner did not suggest adding "chosen" either and it was not his preference nor was it ever suggested. Applicants substituted one indefinite term for another indefinite term. The examiner has explained how to resolve this issue above. No claims containing desired, chosen, preselected, predetermined, etc. will be found allowable. The applicants can either follow the examiner's actual suggestion to remove them entirely or wait for this term to be discussed with his supervisor and appeal conferee in an appeal conference (or if he doesn't believe these are indefinite terms he is respectfully invited to call his supervisor upon receiving this office action to ask him what he thinks about these terms in claims-if he has no problem with them, the examiner will drop the 2nd paragraph 35 USC 112 rejection immediately—the examiner takes no offense in this verification).

The applicants argue Yamashita does not teach a cationic polymer. The examiner disagrees because he teaches a cement composition (which thus is used in a method to cement) comprising acrylic acid copolymers having an amino group in their molecules and their quarternized compounds (col.17, lines 5-7). This quarternized compound is cationic and thus appears to read upon a cationic polymer.

The applicants also argue the terms "from which hydrocarbons are removed" but for references yet this would appear to be new matter because there is no literal support for any or all hydrocarbon being removed with the exception of petroleum.

The applicants argue that Smith et al. (including Borchardt) teach clay stabilizing agents comprising cationic polymers. They state this prior art does not teach particle size distribution agents comprising a cationic polymer. The examiner disagrees. Applicants' particle size distribution agent is a cationic polymer and Smith et al. teach a cationic polymer added to cement. It would also function in the same manner in a cement composition as applicants particle size distribution agent because it is the same exact material (cationic polymer).

The applicants argue the new matter limitation which does not hold because it is new matter and that Booth does not teach adding a set retarder. A retarder is a conventional additive that is routinely added to cement compositions. The applicants disagreed with applicants' statement that a retarder is well known in the art to delay setting. This is not understood. Are applicants saying a retarder does something else? The applicants also seem to infer expertise on backfilling mines in addition to oil well cementing operations and have put themselves in Booth's mindset that he would never need a retarder to delay setting and there would *be no realistic need for a retarder*. The examiner does not find this convincing because quite possibly like any other cementing operation Booth could have wanted to delay the setting of his cement when backfilling mines. The applicants' assertion that there is no realistic need is without merit because retarders are routinely used in cementing operations whenever a need to delay setting

is necessary. This statement of no realistic need appears to represent applicants' own opinion of Booth's mindset and possibly their own which should does not overcome a prima facie case of obviousness. One of ordinary skill in the art would have the obvious design choice of delaying setting of any cement by using a retarder.

The Chatterji reference has been withdrawn as a secondary reference but Vijn remains as a secondary reference. Vijn '488 teaches adding an accelerator which is what applicants appear to mean by use of the term activator (see col.4, line 16).

The applicants' arguments have been fully addressed in this office action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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